

UNIT

C

Concepts

NINTH EDITION

ILLUSTRATED SERIES™

Computer Concepts

Introductory

**Unit C: Computer
Software**



Learning Objectives

- List and describe computer software categories
- Explain copyright law and define the different software licenses
- Explain how to install and uninstall software
- Identify the basic functions and features of operating systems
- Compare operating systems

Learning Objectives (continued)

- Describe utility software, including device drivers
- Define office productivity software, and name examples in each major category
- Define graphics software, and name examples in each major category
- Name other categories of application software, and give examples in each major category

Computer Software

- Software/computer programs
 - Provides instructions and data necessary to carry out tasks
- Graphical user interface (GUI)
 - Allows for computer commands to be executed using pointing devices and on-screen graphics

Computer Software (continued)

- Two major categories of software:
 - System software – used by the computer to perform computer-specific tasks
 - Operating systems
 - Utilities
 - Device drivers
 - Application software – allows users to complete tasks on a computer
 - Document production
 - Communications

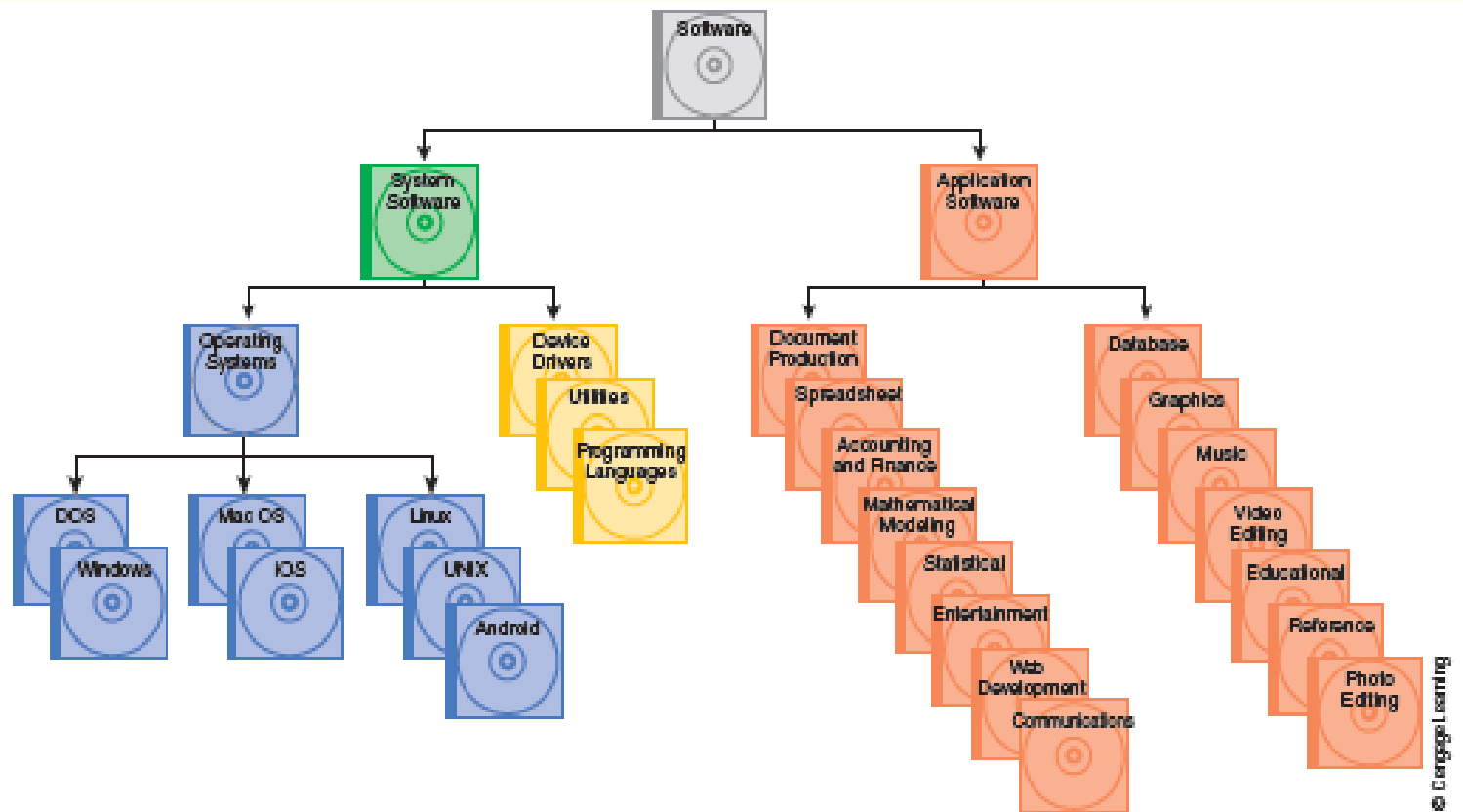


Figure C-1: Examples of software categories

Computer Software (continued)

- Local application
 - Installed directly on a computer
- A Web application (Web app) or cloudware
 - Accessed using the Web
- Portable application
 - Can run from a removable device
- Mobile application or app
 - Runs on a smart phone or tablet

Computer Software (continued)

- System requirements
 - Minimum hardware capacities

System Requirements

Operating Systems: Windows 7/Vista/XP

Processor: Intel Pentium or Core or equivalent

Memory: 1 GB or more

Hard Drive Space: 10 MB for installation

Network Protocol: TCP/IP

Network Connection: 10/100 Ethernet LAN/WAN,
cable modem, DSL router, ISDN router, or dial-up modem



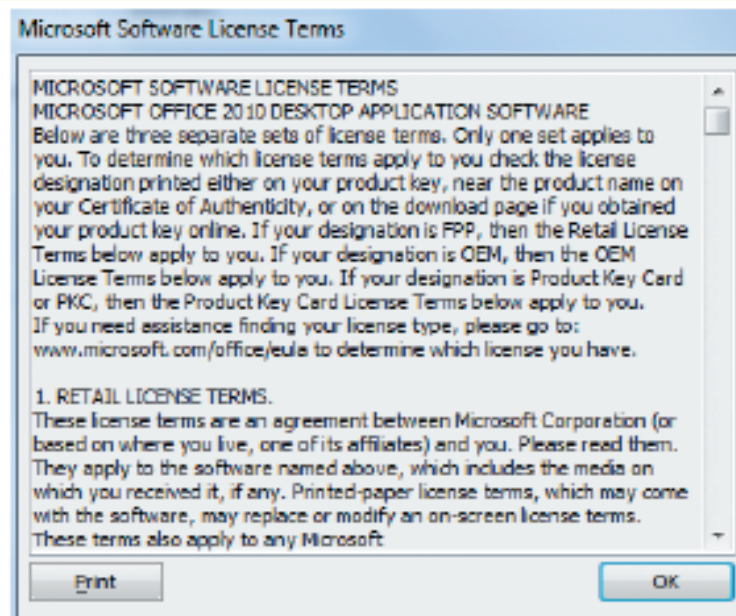
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Figure C-2: System requirements

Licenses and Copyrights

- Copyright
 - Legal protection of an author's original work
- Software license or license agreement
 - Legal contract defining how a computer program can be used



Used with permission from Microsoft

Figure C-5: Microsoft Office 2010 software license

Licenses and Copyrights (continued)

- Legal software categories:
 - Public domain software – not protected by copyright
 - Proprietary software – copyright restricts use
- Types of software licenses:
 - Single-user license
 - Site license
 - Multiple-user license
 - Concurrent-use license

Licenses and Copyrights (continued)

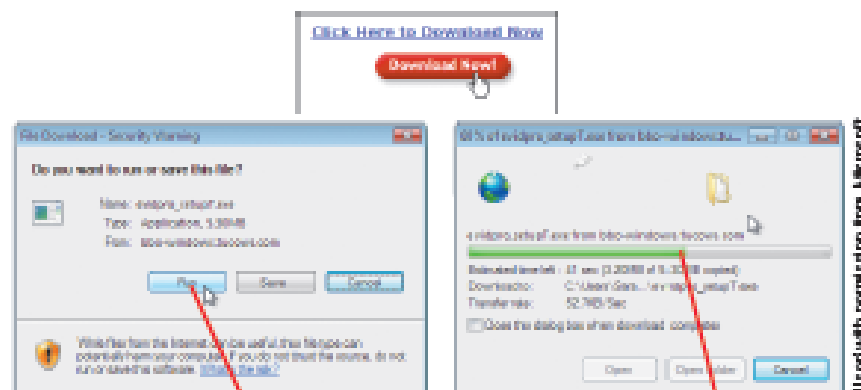
- Commercial software – purchase right to use
 - Demoware – use for a trial period
- Shareware – try first and then can purchase
- Freeware – free to use but still need a license
- Open source – program code/instructions available for modification



Figure C-4: Open Source Initiative

How To Install and Uninstall Software

- Installing or loading software onto a computer so it can be run
 - From CD or DVD
 - Download



If you are downloading from a trusted site and have antivirus software running, click the Run button in the File Download dialog box.

The files are downloaded to your computer.

Figure C-7: Downloading software

How To Install and Uninstall Software (continued)

- Installation Process

- Run Setup program
- Specify location to store program files
- Select type – full or custom
- Activation
 - Enter validation code or software key
- Registration
 - Provide software publisher with your personal information

How To Install and Uninstall Software (continued)

- Start or run the installed software



Figure C-10: Many ways to start an application

How To Install and Uninstall Software (continued)

- Updates
 - Patches – correct, secure, or enhance an existing program
 - Service packs – collection of updates, fixes, and/or enhancements
 - Upgrades – licensed users can purchase new versions at a special price
- Uninstall program – run to remove software

Operating Systems—An Overview

- Operating System (OS) – Master controller for all computer activities
 - Controls user-to-digital-device interaction
 - Controls digital-device-to-digital-devices interaction

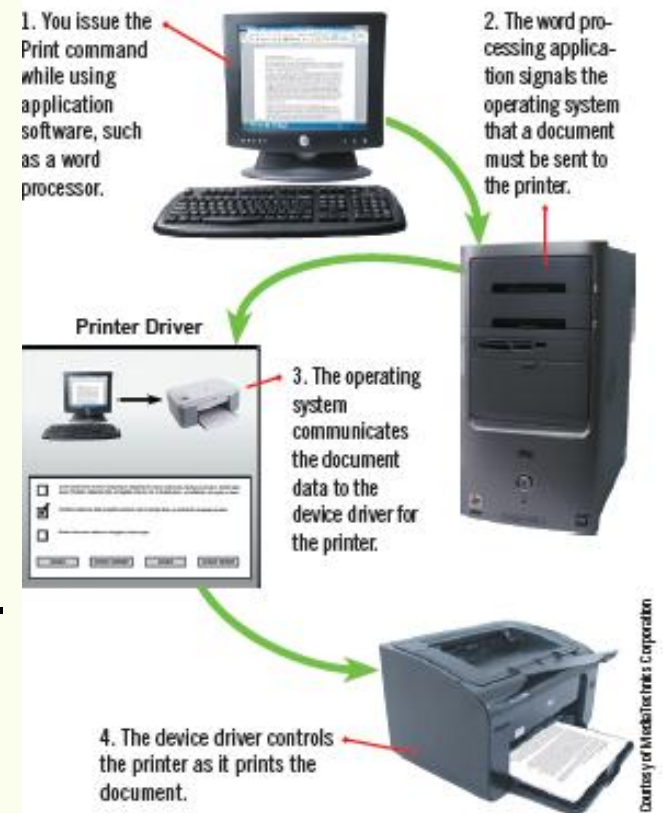


Figure C-11: Example of how the operating system works

Operating Systems—An Overview (continued)

- Operating System allow users to perform specific tasks

You can	Most operating systems
Launch programs	display graphical objects such as icons, a Start button, and the Programs menu that you can use to start programs
Manage files	include programs, such as Windows Explorer, that allow you to view a list of folders and files, move them to different storage devices, copy them, rename them, and delete them
Get help	offer a Help system that you can use to find out more about the OS, such as how various commands work
Customize the user interface environment	provide utilities that help you customize your screen display, system sounds, security and access
Configure equipment and install and un-install programs	provide access to utilities that help you set up and configure your computer's hardware and peripheral devices, install and uninstall software

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Table C-2: Ways you can use an operating system

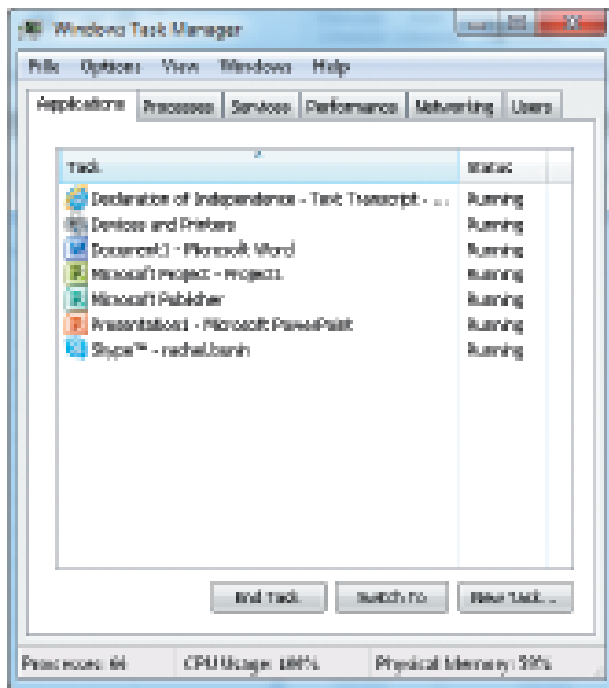


Figure C-13: Windows 7
Task Manager

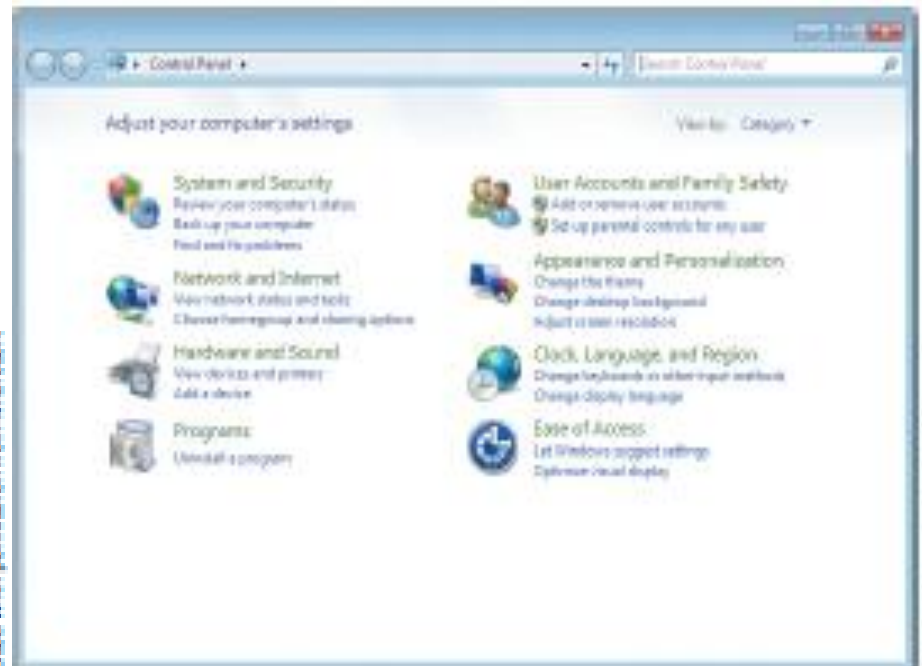


Figure C-14: Windows 7
Control Panel

Operating Systems—A Comparison

- User interface – combination of hardware and software that determines how you interact with a computer
- Three major operating systems
 - Windows
 - Mac OS
 - Linux
- Each OS has different versions

Operating Systems—A Comparison (continued)

- Microsoft Windows - OS installed on PCs



Figure C-15: Windows 7 User Interface

Operating Systems—A Comparison (continued)

- Linux – Free, downloadable OS
- Distributed via General Public License (GPL) allowing use, distribution and resale

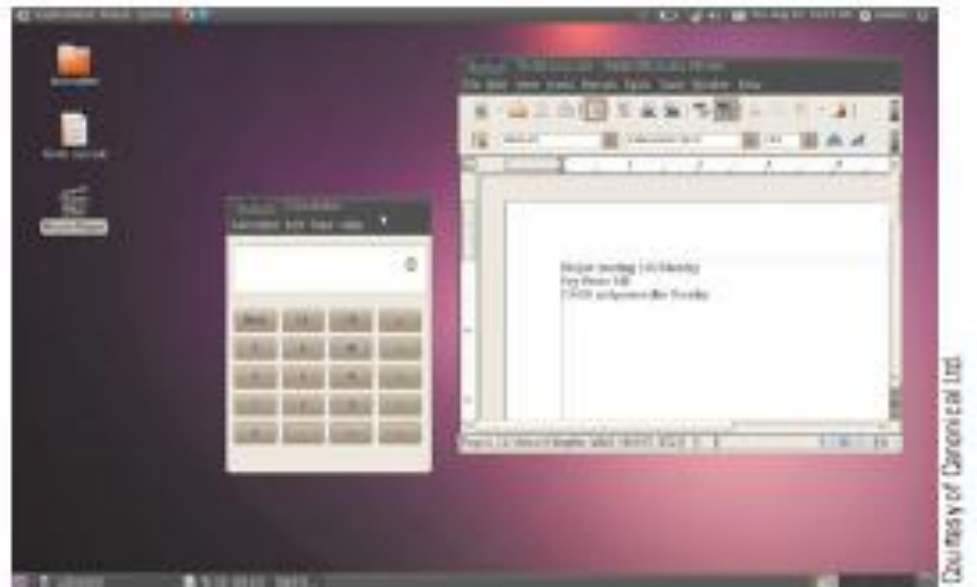


Figure C-16: The Ubuntu Linux operating system interface

Operating Systems—A Comparison (continued)

- Major tablet operating systems
 - Android
 - iOS – Apple
 - Windows tablet



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Figure C-17: Tablet computer operating systems

Operating Systems—A Comparison (continued)

- Major tablet operating systems
 - Android
 - iOS – Apple
 - Windows Mobile



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Figure C-18: Smartphone operating systems

Utility Software

- Utility software or utilities – performs non-required, but still important tasks
 - Backup data
 - Recover data
 - Restore computer to previous settings

Utility Software (continued)

- Monitor and configure system settings



Figure C-19: Example of a utility to optimize your system

Utility Software (continued)

- Maintain and safeguard files



Figure C-20: Microsoft Windows System and Security utilities

Utility Software (continued)

- Monitor and configure hardware settings and device drivers

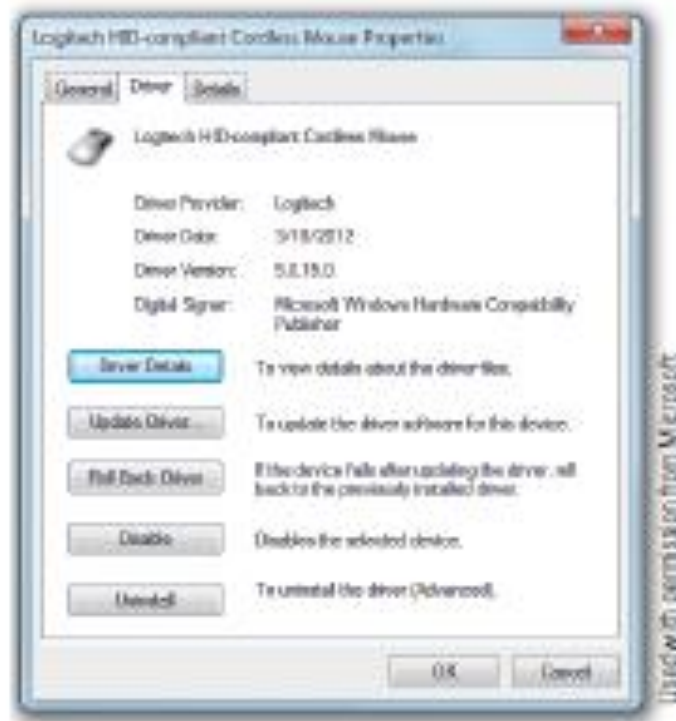


Figure C-22: Checking device driver details

Utility Software (continued)

- Third party software to increase productivity



Figure C-21: Adobe Reader is a free utility to read PDF files

Utility Software (continued)

- Desktop gadget (gadget) or widget – displays information on the desktop



Figure C-23: Desktop gadgets

Office Productivity Software

- Office productivity software
 - Designed to be used in an office
 - Integrates word processing, spreadsheet, database, drawing, presentation capabilities



Office Productivity Software (continued)

- Word processing software
 - Used to produce documents
 - Microsoft Word, OpenOffice Writer

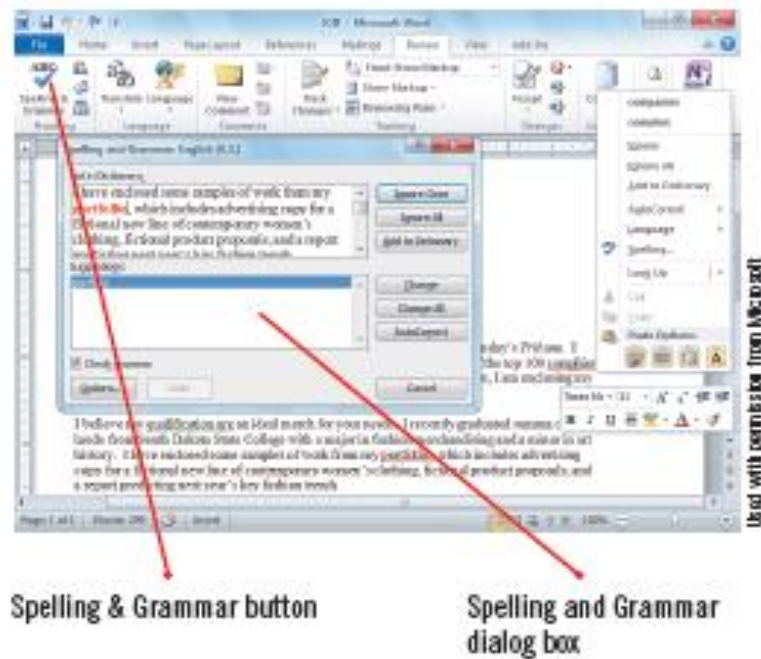


Figure C-24: Checking the spelling of a document in Microsoft Word

Office Productivity Software (continued)

- Spreadsheet software
 - For projects with repetitive calculations
 - Microsoft Excel, OpenOffice Calc
 - Worksheet – grid of columns and rows

Espresso Expresso

	Current	Scenario 1	Scenario 2
Projected Income (total from income tab)	\$488,000.00	\$372,000.00	\$243,000.00
Cost of coffee, etc. (total from cost tab)	\$128,000.00	\$128,000.00	\$128,000.00
Wages	\$128,000.00	\$128,000.00	\$128,000.00
Rent	\$26,000.00	\$26,000.00	\$26,000.00
Advertising	\$186,000.00	\$186,000.00	\$186,000.00
Telephone	\$2,700.00	\$2,700.00	\$2,700.00
Utilities	\$6,600.00	\$6,600.00	\$6,600.00
Insurance	\$1,000.00	\$1,000.00	\$1,000.00
Projected Expenses	\$356,440.00	\$396,440.00	\$396,440.00
Projected Profit	\$131,560.00	\$675,560.00	\$-153,440.00

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Figure C-25: A spreadsheet in OpenOffice Calc

Values

Office Productivity Software (continued)

- Database software
 - Used to create a collection of data that is stored electronically as a series of records in tables
 - Microsoft Access
OpenOffice Base

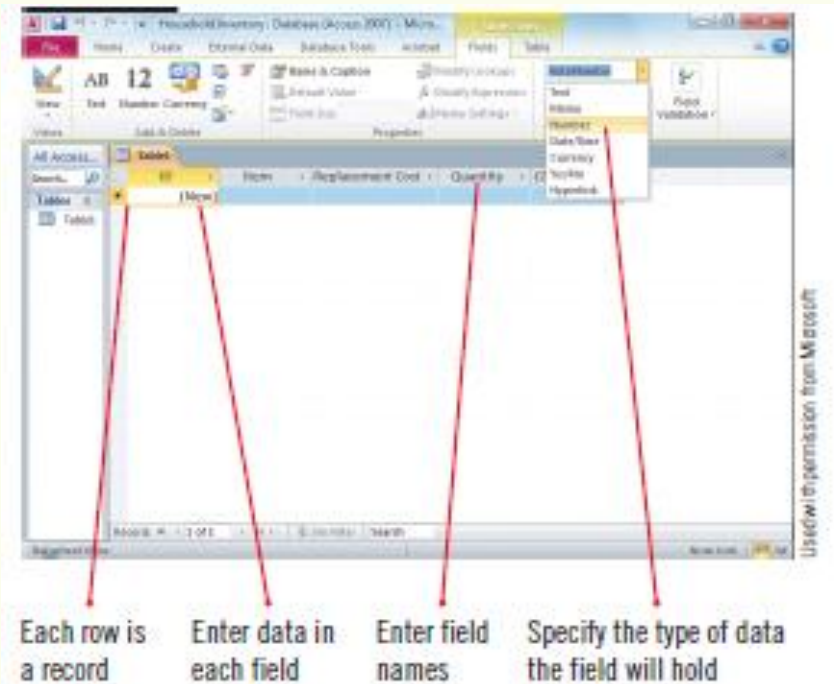


Figure C-27: Creating a table in Microsoft Access

Office Productivity Software (continued)

- Presentation software
 - Provides all the tools needed to make a series of electronic slides
 - Microsoft PowerPoint, OpenOffice Impress

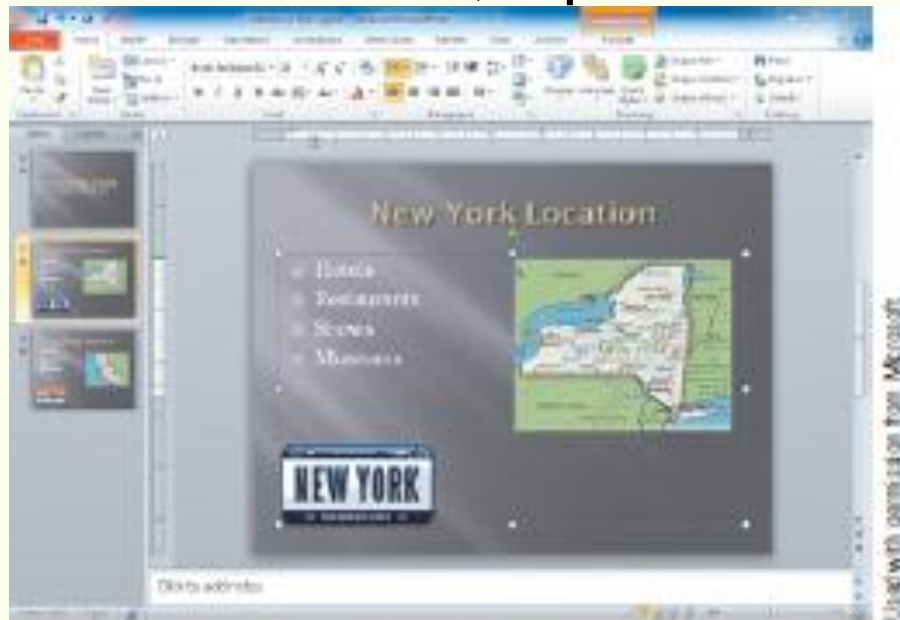


Figure C-28: A slide in a Microsoft PowerPoint presentation

Graphics Software

- Graphics
 - Picture, drawing, sketch, photograph, image, or icon on screen or printed output
- Graphics software
 - Helps you create, display, modify, manipulate, and print graphics

Graphics Software (continued)

- Paint or image editing software – used to create more sophisticated images

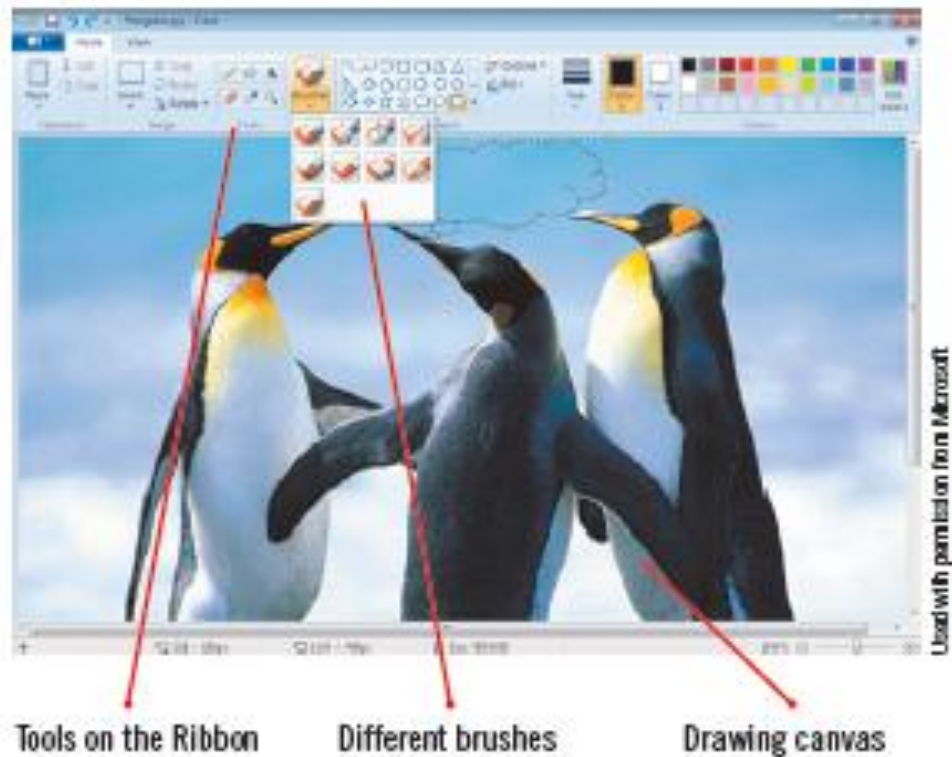


Figure C-30: Paint software

Graphics Software (continued)

- Photo editing software – used to enhance quality of photos

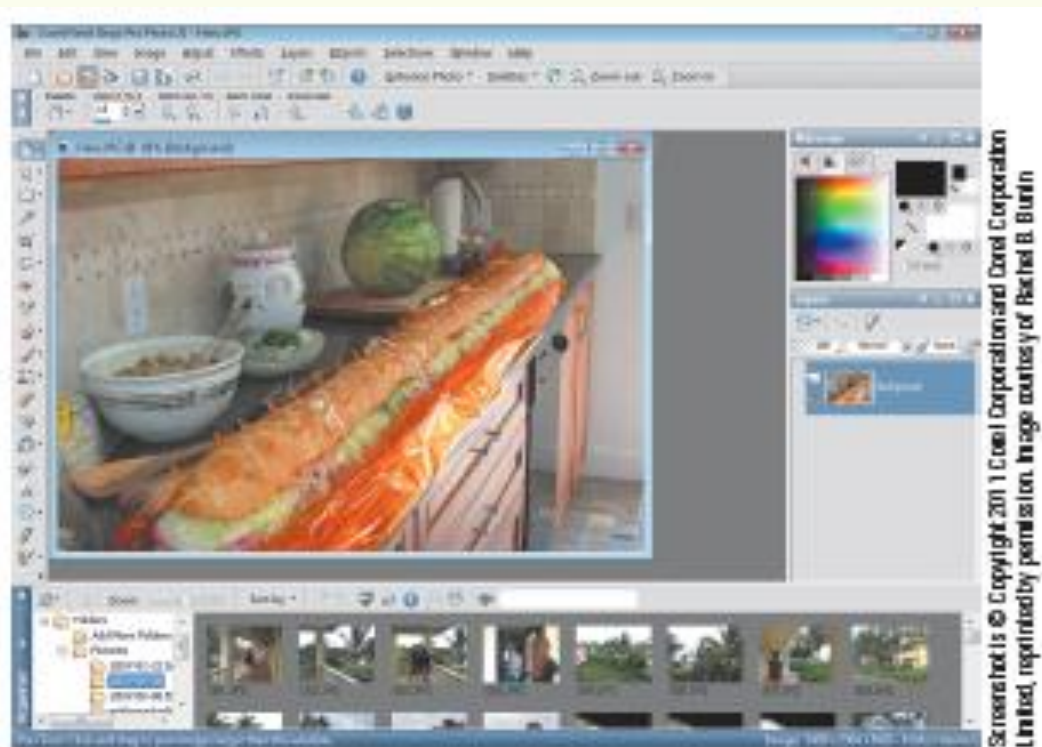


Figure C-31: Photo editing software

Graphics Software (continued)

- Clip art – readily available images used with productivity software



Figure C-32: Inserting clip art in a presentation

Graphics Software (continued)

- 3D graphics software - computer aided design (CAD) software

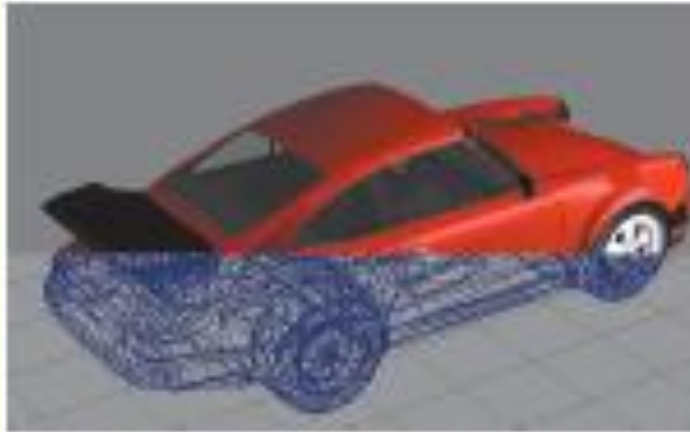



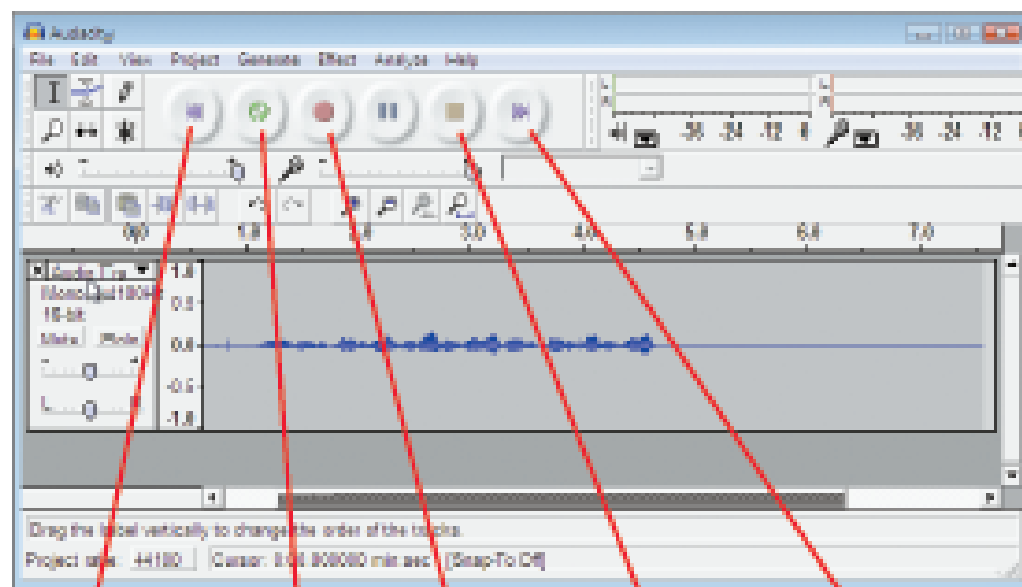
Figure C-33: 3D graphics created using software programs

Other Application Software

- 
- Entertainment
 - Gaming
 - Music and video
 - Education
 - Business
 - Science

Other Application Software (continued)

- Computer aided music software – used to make digital voice and music recordings



Rewind to
beginning

Play

Record

Stop

Fast forward
to end

Figure C-35: Audio editing software

Other Application Software (continued)

- Video editing or DVD authoring software

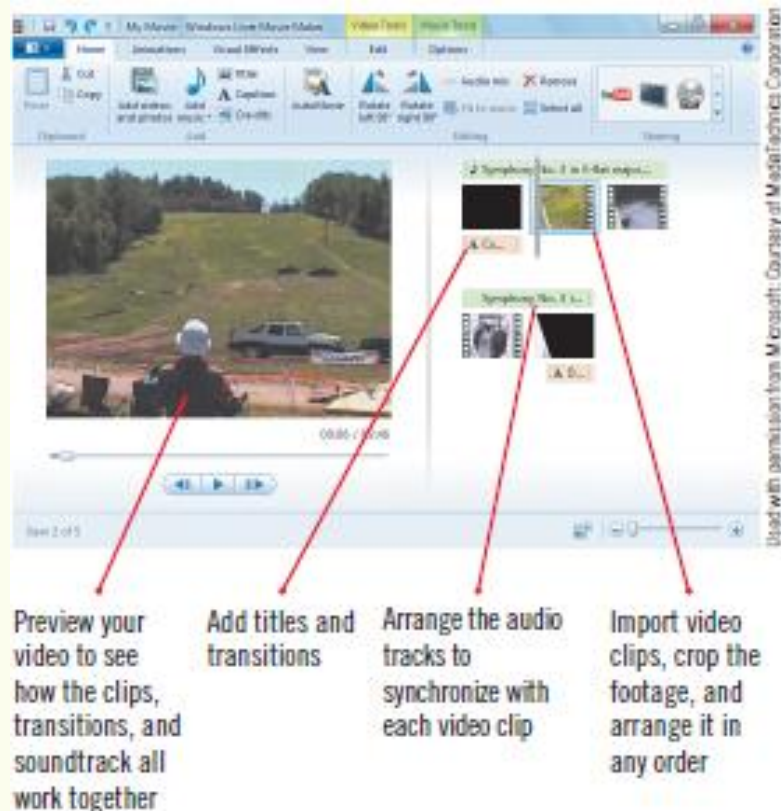


Figure C-36: Video editing software

Other Application Software (continued)

- Business project tracking software

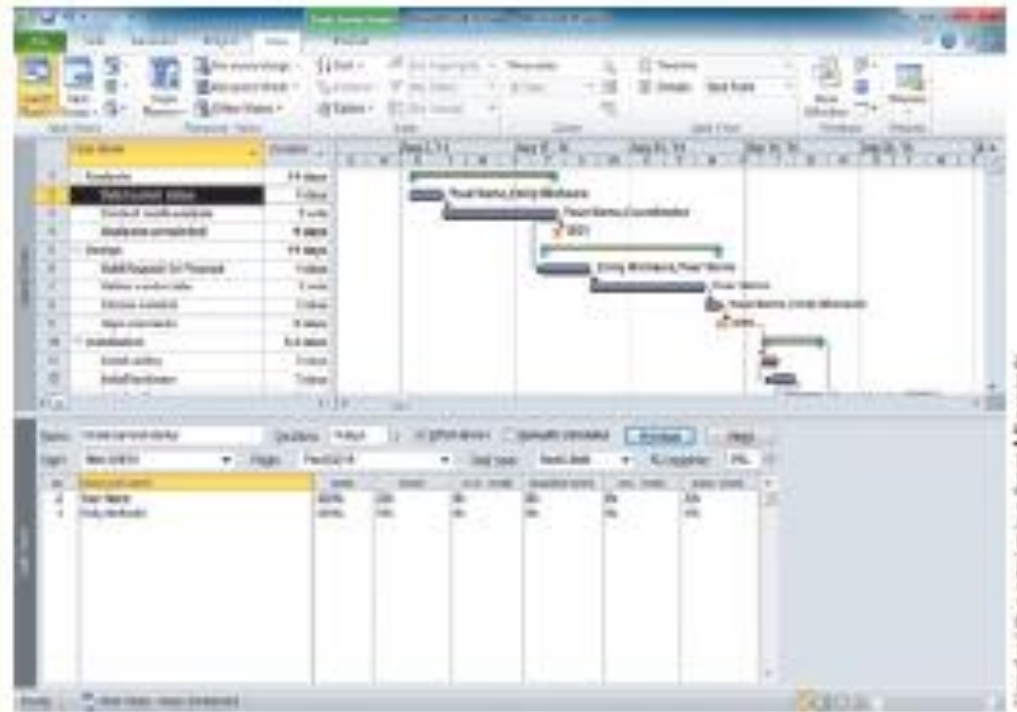


Figure C-37: Project management software

Talking Points: What Is The Downside To Software Piracy?

- Software piracy – illegal copying of software
- End-user piracy includes installing a friend's software on your computer
- Counterfeiting – illegal duplication of software and sometimes even its packaging
- Internet piracy – using the Web to distribute unauthorized software illegally

Summary

- This chapter introduced:
 - Computer Software
 - Licenses and Copyrights
 - How to Install and Uninstall Software
 - Operating Systems—An Overview
 - Operating Systems—A Comparison
 - Utility Software
 - Office Productivity Software
 - Graphics Software
 - Other Application Software